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AYSIDE REES

SERIES II. BEING A DESCRIPTION OF THE HORN-
BEAM, CHESTNUT, WILLOWS, OAKS,
BUTTONWOOD, ETC. * * * * *

BY F. SCHUYLER MATHEWS * * *
ILLUSTRATED WITH PEN AND INK
DRAWINGS FROM NATURE BY THE
AUTHOR * * * * *

TABER-PRANG ART CO
SPRINGFIELD, MASS.

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INTRODUCTION

WAYSIDE TREES, SERIES II.



As we advance in the selection of simple leaves we reach a number of trees most of which conform to a very common type; i.e. more or less pointed-elliptical, or attenuated, and evenly toothed. This division comprises the horn-beams, chestnut, beech, willows, and poplars. Then comes a break in the rule, and the undivided-edged leaf is displaced by the ornamentally and regularly, though not deeply, divided leaf of the Thorn family. So our system progresses as follows:—

Leaves, Simple:

	pages
Class 3 { Alternate growing	
{ With teeth	
{ Undivided edge	3-13
" 4 { Alternate growing	
{ With teeth	
{ Divided edge	15

Then come the oaks which establish an independent system of their own, thus:—

Class 5 { Alternate growing	pages
{ Without teeth	
{ Undulating edge	17, 19
" 6 { Alternate growing	
{ Bristle pointed	
{ Divided edge	21
" 7 { Alternate growing	
{ Without teeth	
{ Irregular, undivided edge	23

Following the oaks are two handsome trees with remarkably ornamental, large leaves, which again conform to the system broken by the eccentric oaks. The buttonwood and the liquidambar may be classified as follows:—

Class 8 { Alternate growing	
{ With teeth	
{ Divided edge	25

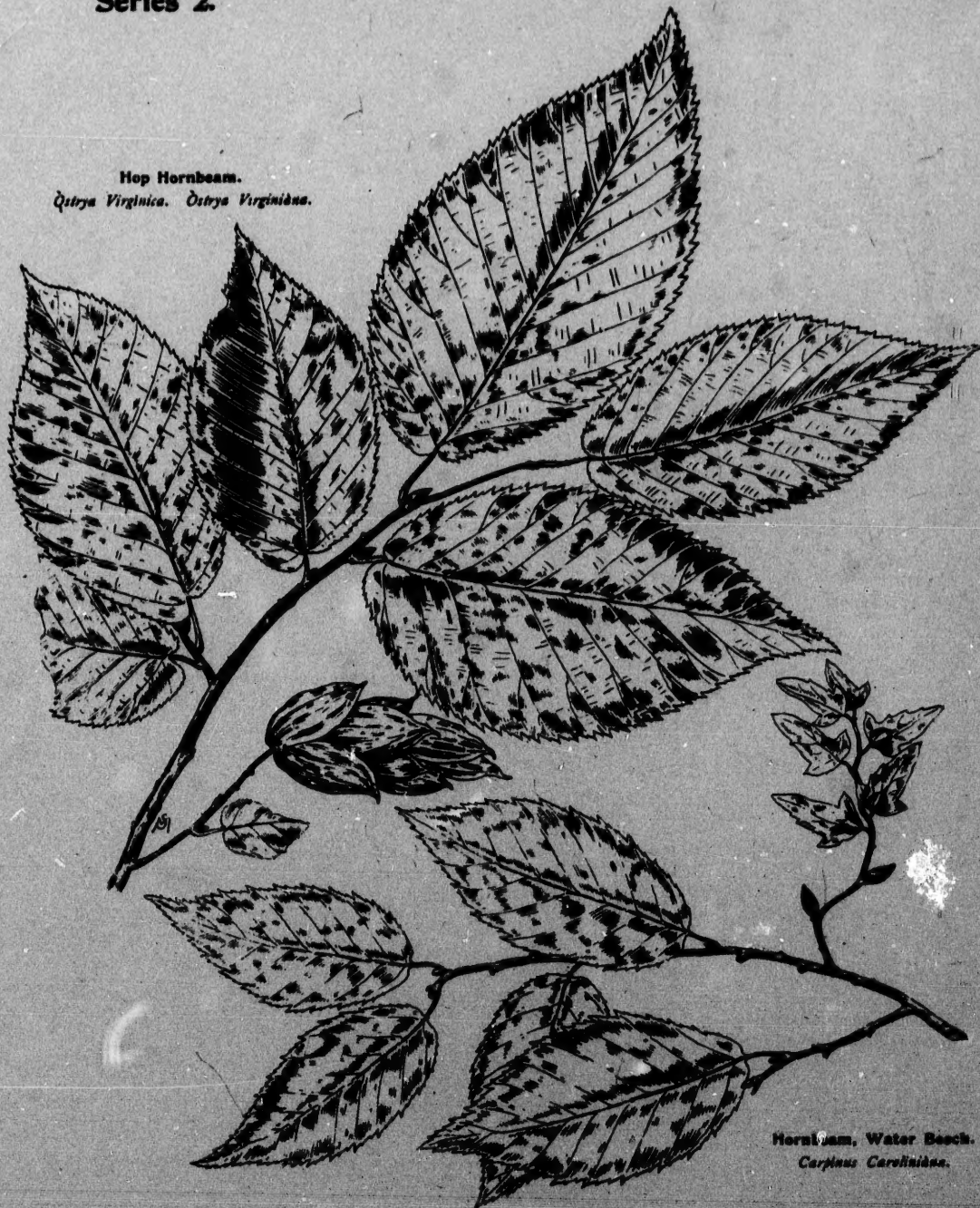
With Series II we come to the end of the trees whose leaves grow alternately on the twigs.

F. SCHUYLER MATTHEWS.

1900.

Series 2.

Hop Hornbeam.
Ostrya Virginica. *Ostrya Virginiana*.



Hornbeam, Water Beech.
Carpinus Carolinae.



ernium, Water Beech.
Carpinus Caroliniana.

Hop Hornbeam.

Ostrya Virginica. Ostrya Virginiana.

- Family . . . CUPULIFERÆ, Oak.
Leaf . . . Dull, dark yellow-green, tufts of
down at angles of veins beneath.
Seed . . . Like hop cluster, about 2 ins. long.
Bark . . . Light brown, rough, platelike scales;
smooth upper branches marked
like the birches.
Height . . . 20 ft. to 30 ft., sometimes 60 ft.
Habitat . . . Me., to the Dakotas, south to north-
ern Fla. and eastern Texas.

Hornbeam, Water Beech.

Carpinus Caroliniana.

- Family . . . CUPULIFERÆ, Oak.
Leaf . . . Pale olive-green, yellowish beneath,
yellow ribs.
Seed . . . Clusters, 3-lobed wing, seed at base,
usually in pairs base to base.
Bark . . . Light gray-brown, dark brown hori-
zontal bands, not furrowed, mode-
rately rough.
Height . . . 25 ft. to 40 ft.
Habitat . . . N. Y., to Tampa Bay, Fla., west to
Minn., Neb., Kan., Indian Ter.,
and eastern Texas.

Series 2.

Beech.

Fagus Americana. *Fagus ferruginea.*



Chestnut.

Castanea sativa. *Castanea dentata.*



Chestnut.

Castanea sativa. Castanea dentata.

- Family . . . CUPULIFERÆ, Oak.
Leaf . . . Dark yellow-green, yellow ribs, and pale green beneath.
Fruit . . . Usually 2, sometimes 3 nuts in the burr.
Bark . . . Dull, gray-brown, broad, flat ridges.
Height . . . 60 ft. to 100 ft.
Habitat . . . Southern Me., Valley of Winooki Riv., Vt., southern shore Lake Ontario, to southeastern Mich., south to Del., and Ind., Alleghany Mts., to Ala., and Miss., central Ky., and Tenn.

Beech.

Fagus Americana. Fagus ferruginea.

- Family . . . CUPULIFERÆ, Oak.
Leaf . . . Silky and thin, straight ribbed, modified green, spreads out horizontally.
Fruit . . . Small burr, not sharp prickles, nut three-cornered.
Bark . . . Whitish gray, round-spotted, very smooth.
Height . . . 50 ft. to 70 ft., sometimes 100 ft.
Habitat . . . Widely distributed throughout the northern States, south to western Fla., southern Ill., and southeastern Mo., to valley of Trinity Riv., Texas.

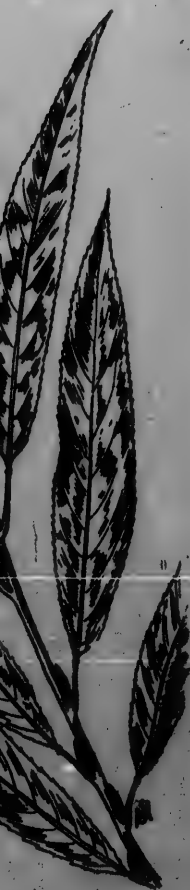
Series 2.



Heart-leaved Willow.
Salix cordata.

Long-leaved Willow.
Salix longifolia.

Crack Willow.
Salix fragilis.



Heart-leaved Willow.

Salix cordata.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Heart-shaped at base, stipules (leafy-terminals) at base of leaf stem, bright green, both sides.
 Twig . . . Light brown, brittle.
 Bark . . . Gray-brown.
 Height . . . 10 ft. to 20 ft., often a shrub.
 Habitat . . . Common. A widely distributed and variable species.

Long-leaved Willow.

Salix longifolia.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Attenuated, green both sides, remotely toothed.
 Twig . . . Light or dark old gold, often dull purplish red.
 Bark . . . Smooth, dark brown, ruddy tinged, close scales.
 Height . . . Usually 20 ft., often a shrub. 70 ft.,
 Habitat . . . Western New England, to valley of Potomac Riv., west to Cal., south beside Mississippi Riv., to Tex., rare on Atlantic seaboard.

Crack Willow.

Salix fragilis.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Slender, light green, pale beneath, tiny wart one on each side of stem at base of leaf.
 Twig . . . Somewhat green-yellow, very brittle at base.
 Bark . . . Dark brown, rough.
 Height . . . 50 ft. to 80 ft.
 Habitat . . . Not indigenous, from Europe, extensively naturalized in northeastern States, common in Mass., N. H., and Vermont.

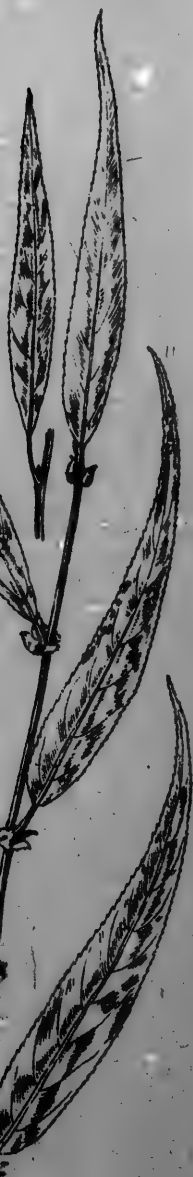
Series 2.



White Willow.
Salix alba var. *tortuosa*.

Weeping Willow.
Salix Babylonica.

Black Willow.
Salix nigra.



Black Willow.
Salix nigra.

White Willow.

Salix alba var. *caerulea*.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Smooth, firm, dull bluish green,
 whitish beneath.
 Twig . . . Olive-green.
 Bark . . . Dark brown, rough.
 Height . . . 50 ft. to 70 ft.
 Habitat . . . Not indigenous, but extensively
 naturalized in N. H., and Mass.

Weeping Willow.

Salix Babylonica.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Slender, light green, hanging from
 slender branchlets.
 Twig . . . Very slender, yellow-green or light
 brown, suspended.
 Bark . . . Rough, dark brown.
 Height . . . 40 ft. to 60 ft.
 Habitat . . . Not indigenous; from Syria, spread-
 ing along river banks, parks, gar-
 dens, and city streets.

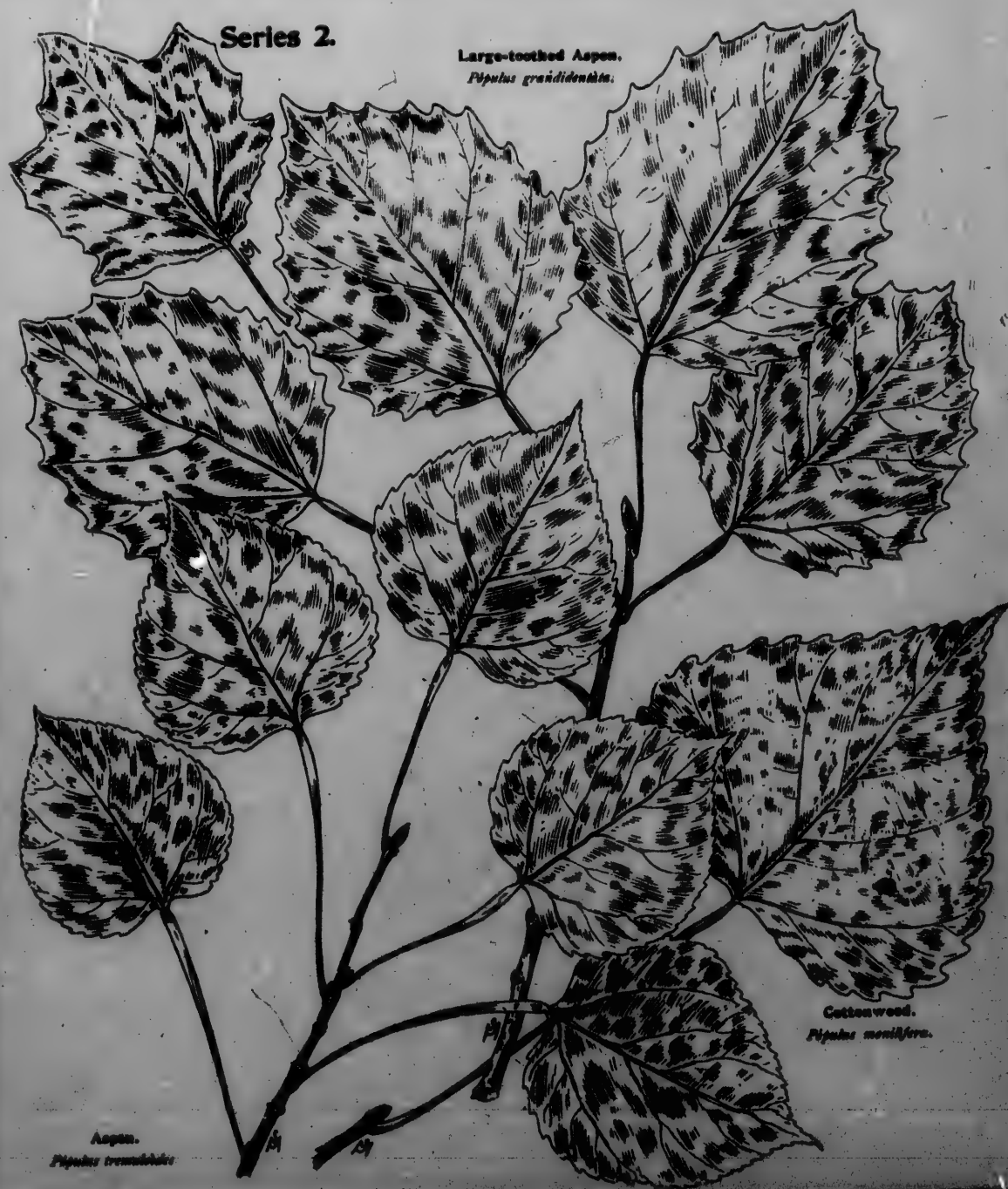
Black Willow.

Salix nigra.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Tapering tips somewhat curved,
 roundish or wedge-shaped base,
 light green.
 Twig . . . Slender, stipule (leaflet) at base of
 leaf-stem, deciduous, often absent.
 Bark . . . Dark brown, sometimes lighter
 brown, rough.
 Height . . . 30 ft. to 40 ft., occasionally 120 ft.
 Habitat . . . Shores Lakes Huron and Superior,
 northern Vt. and N. Y., south to
 Fla., west to Dak., Neb., Kan.,
 Oklahoma and western Texas.

Series 2.

Large-toothed Aspen.
Populus grandidentata.



Cottonwood.
Populus monilifera.

Aspen.
Populus tremuloides.



Cottonwood.
Populus monilifera.

Large-toothed Aspen.

Populus grandidentata.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Dark, whitish green, coarsely toothed,
 flat stem.
 Bark . . . Grayish-green, fissured, base of trunk
 brownish.
 Height . . . 40 ft. to 70 ft., rarely 80 ft.
 Habitat . . . Me., to Minn., south to northern
 Del., southern Ind., and Ill.,
 Alleghany Mts., to N. Car. west-
 ward to central Ky., and Tenn.

Aspen.

Populus tremuloides.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Dark whitish green, flat stem
 Bark . . . Whitish-green, dull, horizontal scars,
 trunk-base blackish.
 Height . . . 25 ft. to 50 ft., occasionally 100 ft.
 Habitat . . . Northern States to mts. of Penn.,
 northeastern Mo., southern Neb.,
 the mts. of the West. The most
 widely distributed tree of North
 America.

Cottonwood.

Populus monilifera.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Firm, light green, pale beneath,
 yellow midrib, flat stemmed.
 Bark . . . Ash-gray, yellowish, sometimes
 tinged green.
 Height . . . 70 ft. to 80 ft., sometimes 100 ft.
 Habitat . . . Shore Lake Champlain, Vt., western
 New England, N.Y., Pa., west of
 Alleghany Mts., Atlantic States
 south of the Potomac Riv., to
 western Fla., west to Rocky Mts.

Series 2.

Balsam Poplar, Tacamahac.

P. bahamifera var. *intermedia*.



Balm of Gilead.

Piphus bahamifera var. *condicans*.



Balm of Gilead.

Populus balsamifera var. *canadensis*.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Broad, ribs and veins downy, deep green, whitish beneath; buds odor-
 ous.
 Bark . . . Light gray-brown, small scales.
 Height . . . 40 ft. to 70 ft.
 Habitat . . . Northeastern States, rare wild, com-
 mon in cultivation.

Other common varieties of the Balsam Poplar.

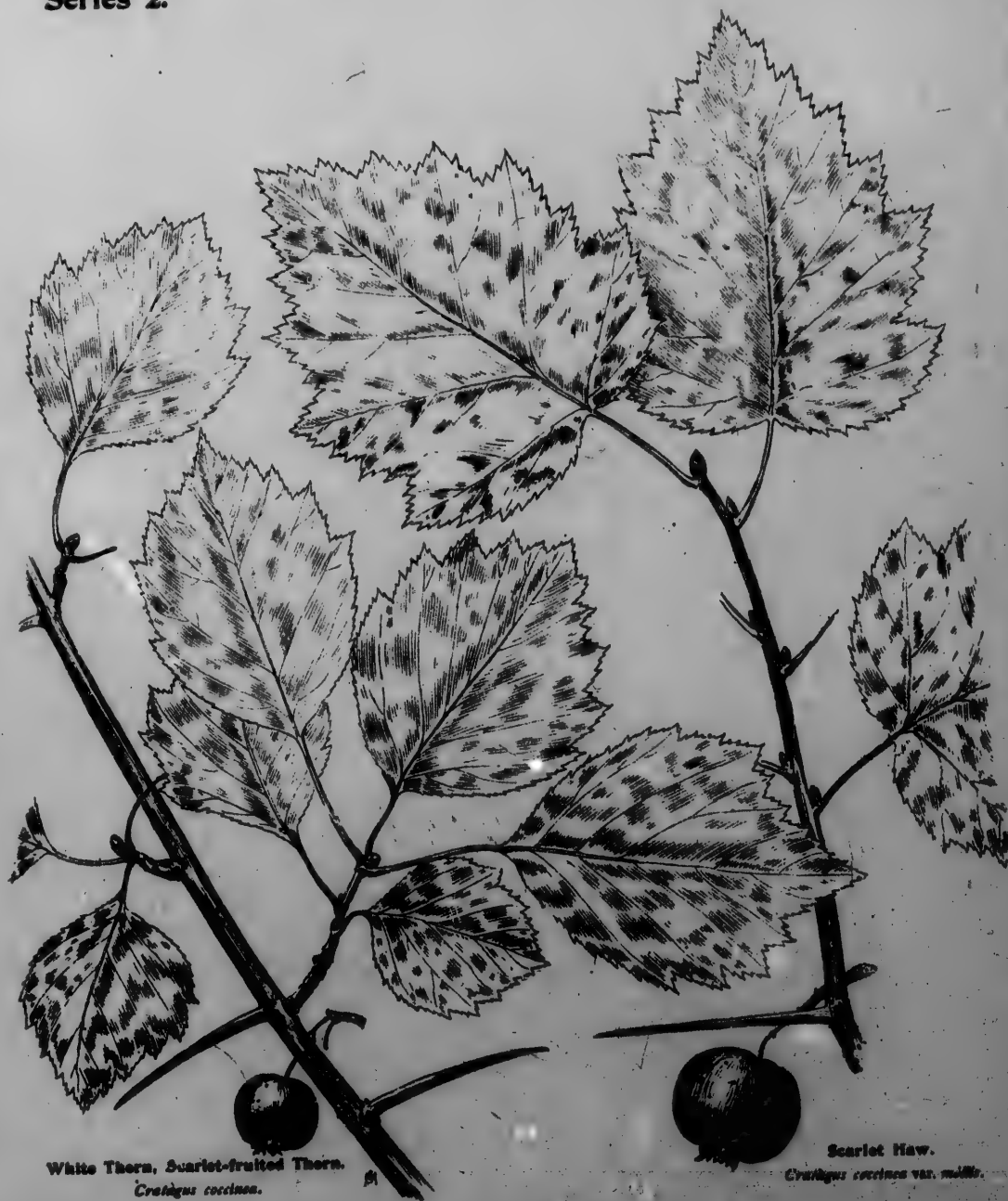
- P. balsamifera* var. *intermedia*.
P. balsamifera var. *Vimindlis*.
P. balsamifera var. *latifolia*.

Balsam Poplar, Tacamahac.

Populus balsamifera.

- Family . . . SALICACEÆ, Willow.
 Leaf . . . Thin, deep dark-green, shiny, paler beneath.
 Bark . . . Gray tinged with red, close scales, branches tinged green.
 Height . . . 60 ft. to 70 ft., sometimes 100 ft.
 Habitat . . . Northern New England, N. Y., central Mich., and Minn., Dak., northwestern Neb., Idaho, Oregon, and Nev.

Series 2.



White Thorn, Scarlet-fruited Thorn.
Crataegus coccinea.

Scarlet Hawthorn.
Crataegus coccinea var. *multa*.



White Thorn, Scarlet-fruited Thorn.

Crataegus coccinea.

- Family . . . ROSACEÆ, Rose.
Leaf . . . Slender stems, thin, light dull-green.
Fruit . . . Small, dull red.
Bark . . . Rough, gray-brown, small scales.
Height . . . 12 ft. to 18 ft., rarely 20 ft.
Habitat . . . Me., to northern Fla., and eastern Tex., westward to Neb. and Kan.; common in northern States.

Scarlet Haw.

Crataegus coccinea var. *mollis*.

- Family . . . ROSACEÆ, Rose.
Leaf . . . Large, firm, more or less woolly beneath, light green.
Fruit . . . Dull scarlet, large, 1 in. broad.
Bark . . . Gray-brown, and ruddy brown, small scales.
Height . . . 15 ft. to 30 ft.
Habitat . . . Eastern Mass., through central Mich. to Mo., central Tenn., Ark., to Tex.

Scarlet Haw.
Crataegus coccinea var. *mollis*.

Series 2.

Post Oak, Iron Oak.

Quercus stellata.



Bur Oak, Overcup Oak.

Quercus macrocarpa.

White Oak.

Quercus alba.



White Oak.
Quercus alba.

Post Oak, Iron Oak

Quercus stellata.

- Family . . . CUPULIFERÆ, Oak. Class, White Oaks.
Leaf . . . 5 to 7 round flaring lobes, rough, deep green.
Acorn . . . Moderate size, short stem, deep cup, small scales.
Bark . . . Dark, brownish gray, resembling White Oak.
Height . . . 50 ft. to 60 ft., rarely 100 ft.
Habitat . . . Cape Cod, Mass., to R. I., Long Island, and to northern Fla., southwestward to Texas.

Bur Oak, Overcup Oak.

Quercus macrocarpa.

- Family . . . CUPULIFERÆ, Oak. Class, White Oaks.
Leaf . . . Deeply round-lobed, large, 6 ins. to 10 ins. long, deep shiny green.
Acorn . . . Stout, round, variable in size, fringed deep cup, nut half or more in cup.
Bark . . . Light brown, deeply furrowed.
Height . . . 70 ft. to 100 ft., rarely 170 ft.
Habitat . . . Penobscot Riv. Val., Me., shore Lake Champlain, Vt., Ware Riv., Mass., Buck and Lancaster Cos., Pa., west to Montana and Oklahoma.

White Oak.

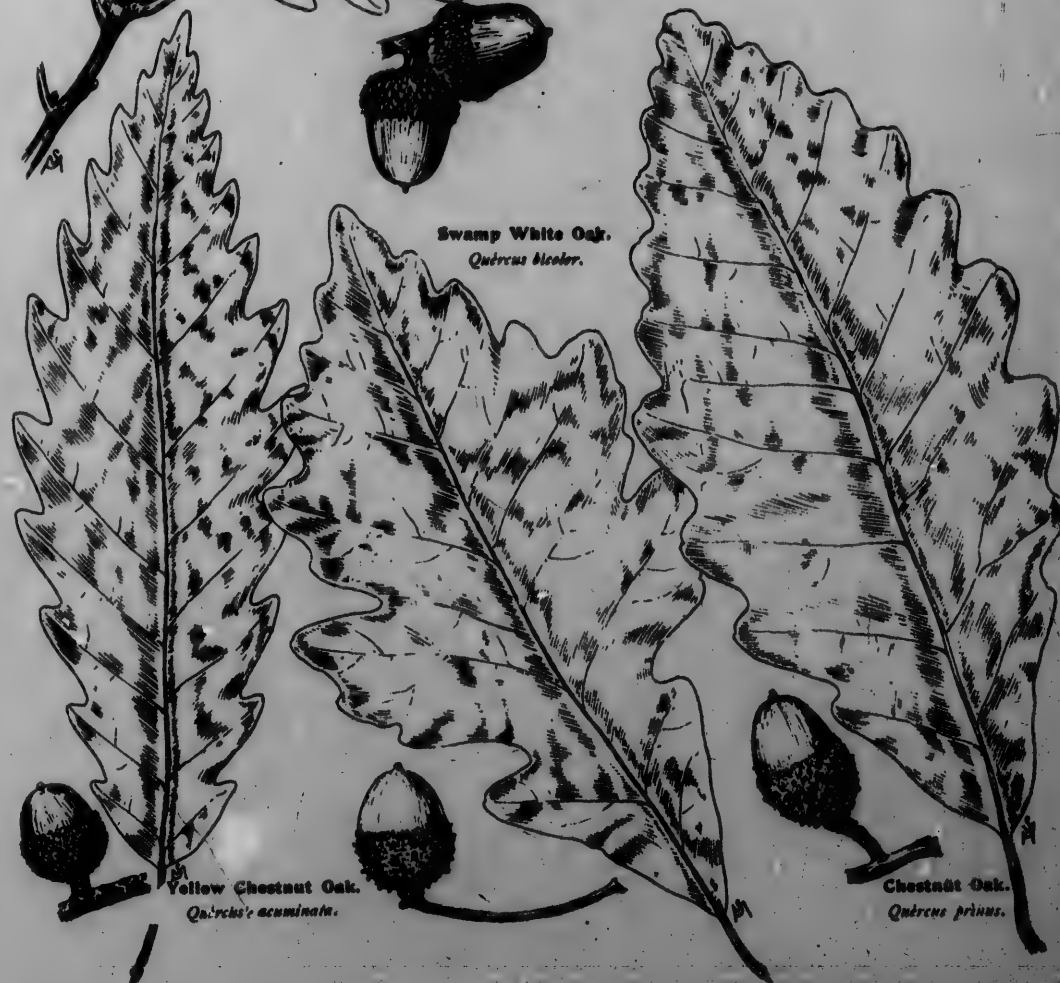
Quercus alba.

- Family . . . CUPULIFERÆ, Oak. Class, White Oaks.
Leaf . . . 3 to 9 round lobes, bright green.
Acorn . . . Rough cup, usually long stem, sweet nut.
Bark . . . Very light buff-gray, moderately rough, thin scales.
Height . . . 70 ft. to 100 ft., sometimes 150 ft.
Habitat . . . Me., to Minn., and south, rare in northern New England.

Series 2.



Basket Oak, Cow Oak.
Quercus Michauxii.



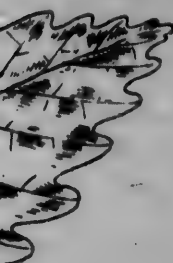
Swamp White Oak.
Quercus bicolor.



Yellow Chestnut Oak.
Quercus acuminata.



Chestnut Oak.
Quercus prinus.



Basket Oak, Cow Oak.

Quercus Michauxii.

- Family . . . CUPULIFERÆ, Oak. Class, Chestnut Oaks.
 Leaf . . . Obtuse at base, large-toothed (about 24), medium green, woolly beneath.
 Acorn . . . Rough, shallow, small-scaled cup, long nut, sweet and large.
 Bark . . . Silvery gray, flaky.
 Height . . . 60 ft. to 100 ft.
 Habitat . . . Swamps, and beside streams, Wilmington, Del., south to northern Fla., and from Ind., and Mo., south to Texas and the Gulf.

Swamp White Oak.

Quercus bicolor.

- Family . . . CUPULIFERÆ, Oak. Class, Chestnut Oaks.
 Leaf . . . Wavy edge, shining, moderate green, whitish downy beneath.
 Acorn . . . Rough cup, bristly edged, usually long stem, sweet nut.
 Bark . . . Light buffish gray, moderately rough, short fissures.
 Height . . . 50 ft. to 70 ft.
 Habitat . . . Southern Me., to Iowa, Mo., and Alleghany Mts., to Ga.

Yellow Chestnut Oak.

Quercus acuminata.

- Family . . . CUPULIFERÆ, Oak. Class, Chestnut Oaks.
 Leaf . . . Narrow (2 inches wide), sharply toothed, yellow-green, grayish beneath.
 Acorn . . . Rounded thin cup, covering one-third of nut, close scales.
 Bark . . . Dull silvery gray, scaly.
 Height . . . 50 ft. to 80 ft., rarely 160 ft.
 Habitat . . . Mass., to Neb., and eastern Kan., south to Texas.

Chestnut Oak.

Quercus prinus.

- Family . . . CUPULIFERÆ, Oak. Class, Chestnut Oaks.
 Leaf . . . Thick, yellow-green, 10 to 15 pairs straight ribs, trifle downy beneath.
 Acorn . . . Large, cup thick with stout scales.
 Bark . . . Brownish gray, deeply furrowed.
 Height . . . 60 ft. to 70 ft., occasionally 100 ft.
 Habitat . . . Southern coast of Me., to Del. and District of Columbia, Alleghany Mts., to Ala., west shore of Lake Champlain, Valley of Genesee River, N. Y., shores of Lake Erie, south to Tenn.



Chestnut Oak.
Quercus prinus.

Series 2.

Spanish Oak.

Quercus falcata.
Quercus digitata.

Black Oak.

Quercus coccinea var. *horrida.*
Quercus velutina.

Scarlet Oak.
Quercus coccinea.

Red Oak.
Quercus rubra.

Pin Oak.
Quercus palustris.



Black Oak.*Quercus coccinea* var. *tinctoria*.
Quercus velutina.**Spanish Oak.***Quercus falcata*. *Quercus digitata*.

- Family . . . CUPULIFERÆ, Oak. Class, Red Oaks.
 Leaf . . . Variable shape, thin, dark green, rusty downy beneath.
 Acorn . . . Two years to mature, cup thin, saucer-shaped, nut $\frac{1}{2}$ in. long.
 Bark . . . Dark brown, with shallow seams.
 Height . . . 45 ft. to 70 ft., occasionally 100 ft.
 Habitat . . . Bucks Co., Pa., southern N. J., south to central Fla., Gulf States to Tex., Ark., southwestern Mo., to central Tenn., and Ky., and southern Ill., and Ind.

Black Oak.*Quercus coccinea* var. *tinctoria*. *Quercus velutina*.

- Family . . . CUPULIFERÆ, Oak. Class, Red Oaks.
 Leaf . . . Deep shiny green, smooth, sometimes downy beneath.
 Acorn . . . Rough cup, often striped, two years to mature.
 Bark . . . Very dark brown, nearly black on smaller branches.
 Height . . . 70 ft. to 80 ft., sometimes 150 ft.
 Habitat . . . Southern N. E. to Gulf States, westward to Kan. and Texas.

Red Oak.*Quercus rubra*.

- Family . . . CUPULIFERÆ, Oak. Class, Red Oaks.
 Leaf . . . Pointed-lobed, bristle-tipped, deep bright green.
 Acorn . . . Two years to mature, saucer-shaped cup, large nut.
 Bark . . . Dark, gray-brown, scaly plates.
 Height . . . 70 ft. to 80 ft.
 Habitat . . . Me., to Tenn., in Alleghany Mts., to northern Ga., westward to Minn., and cen. Kan.

Scarlet Oak.*Quercus coccinea*.

- Family . . . CUPULIFERÆ, Oak. Class, Red Oaks.
 Leaf . . . Deeply and broadly cut, bright green; in autumn bright red.
 Acorn . . . Two years to mature, deep cup-shaped cup, close scales.
 Bark . . . Red inside, light brown outside, small scales.
 Height . . . 60 ft. to 80 ft.
 Habitat . . . Androscoggin River, Me., southern N. H., Vt., and central N. Y.; west to Mich., Minn., and southeastern Neb., south to Dist. of Columbia, northern Ill., and Alleghany Mts. to N. C.

Pin Oak.*Quercus palustris*.

- Family . . . CUPULIFERÆ, Oak. Class, Red Oaks.
 Leaf . . . Rather small, dark lustrous green, pale below with tufts of light hairs on veins.
 Acorn . . . Two years to mature, cup shallow, saucer-shaped, nut round.
 Bark . . . Gray-brown, small, close scales.
 Height . . . 60 ft. to 80 ft., sometimes 120 ft.
 Habitat . . . Connecticut River Val., near Amherst, Mass., to southern Mo., south to lower Potomac Riv. Val., Va., and to central Ky., northern Ark., and eastern Indian Ter.

Character: Branches are set with short spurs or pinlike branchlets.

Series 2.

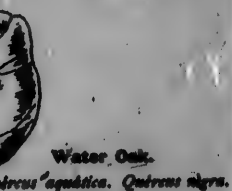
Black Jack Oak.
Quercus nigra. *Quercus Marilandica*.

Water Oak.
Quercus aquatica. *Quercus nigra*.



Laurel Oak.
Quercus imbricaria.

Willow Oak.
Quercus Phellos.

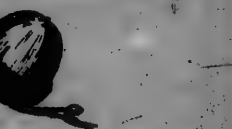


Water Oak.
Quercus aquatica. Quercus nigra.



Black Jack Oak.
Quercus nigra. Quercus Marilandica.

- Family . . . CUPULIFERÆ, Oak. Class, Leather-leaved Oaks.
Leaf . . . Thick, firm, dark olive-green, brownish yellow beneath.
Acorn . . . Two years to mature, shallow cup small scales on edge, round nut.
Bark . . . Very dark brown.
Height . . . 20 ft. to 30 ft., occasionally 50 ft.
Habitat . . . Long Island, N. Y., northern Ohio and Ind., to southeastern Neb., central Kan., and Ind. Ter., south to Fla. and Texas.



Laurel Oak.
Quercus imbricaria.

- Family . . . CUPULIFERÆ, Oak, or Shingle Oak. Class, Leather-leaved Oaks.
Leaf . . . Plain edge, thick, stiff, shiny dark green, pale and downy beneath.
Acorn . . . Squatty-shaped, scaled, thin cup, round nut, bitter.
Bark . . . Light brown, ruddy scales.
Height . . . 30 ft. to 60 ft., rarely 100 ft.
Habitat . . . Lehigh Co., Pa., to Wis., Mo., and northeastern Kan., south in Alleghany Mts., to Ga. and Ala., and from Tenn. to northern Ark.



Willow Oak.
Quercus Phellos.

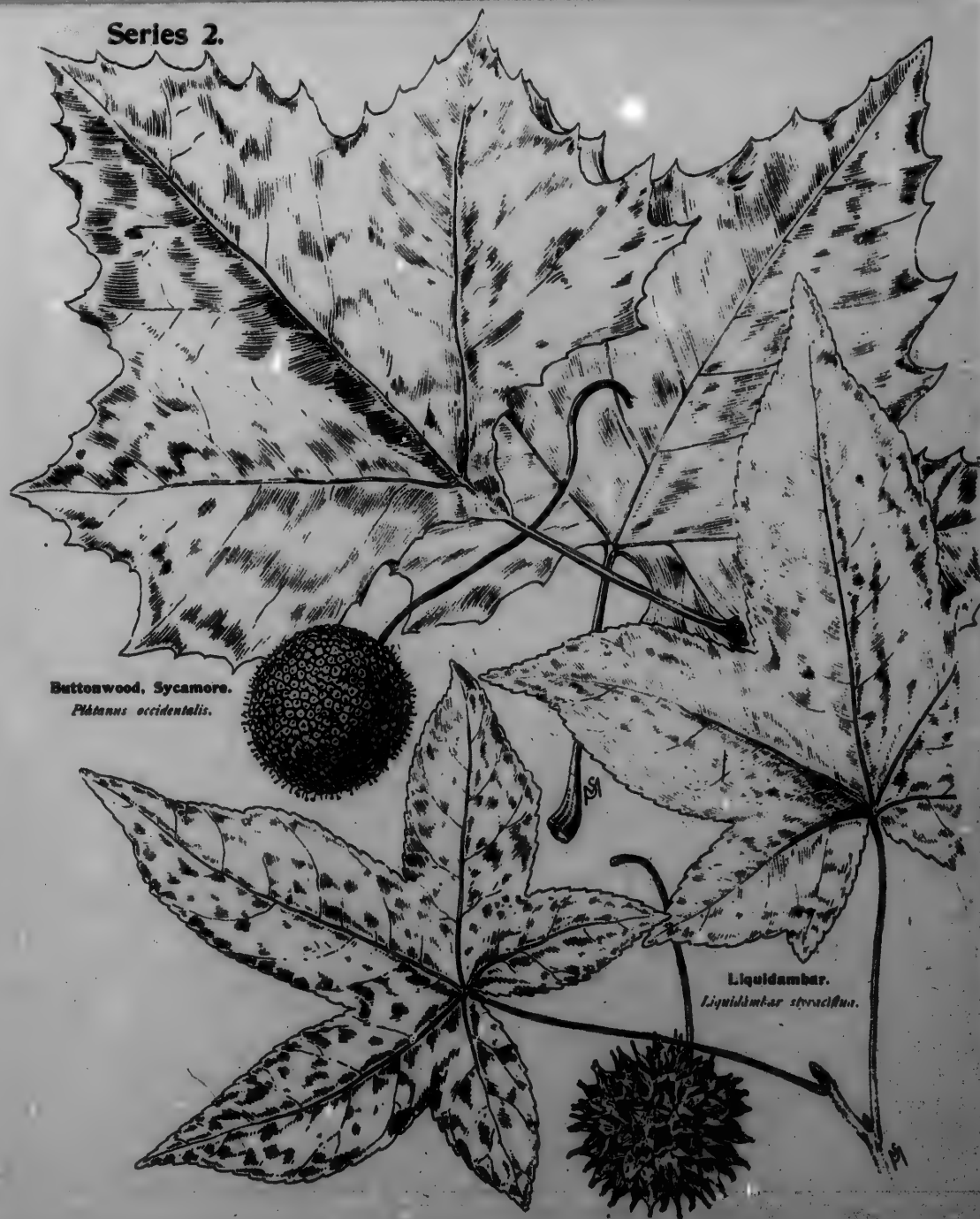
Water Oak.
Quercus aquatica. Quercus nigra.

- Family . . . CUPULIFERÆ, Oak. Class, Leather-leaved Oaks.
Leaf . . . Dull dark green, pale beneath, hairs at junction of veins.
Acorn . . . Two years to mature, shallow cup, close scales.
Bark . . . Brown, smooth, small scales, slender branchlets.
Height . . . 35 ft. to 50 ft., occasionally 80 ft.
Habitat . . . Southern Del., south to Tampa Bay, Fla., Gulf States, to Val. of Colorado River, Tex., Ind. Ter., Ark., Mo., and to central Tenn., and Ky.

Willow Oak.
Quercus Phellos.

- Family . . . CUPULIFERÆ, Oak. Class, Leather-leaved Oaks.
Leaf . . . Bright moderate green, dull, pale below, tenacious color.
Acorn . . . Tiny, saucer-shaped cup, round nut, orange-yellow, and bitter.
Bark . . . Reddish brown, close scales.
Height . . . 30 ft. to 60 ft., sometimes 80 ft.
Habitat . . . Tottenville, S. I., N. Y., to northeastern Fla., Gulf States to Tex., southern Kan., to southeastern Mo.

Series 2.



Buttonwood, Sycamore.
Platanus occidentalis.

Liquidambar.
Liquidambar styraciflua.



Buttonwood, Sycamore.

Platanus occidentalis.

- Family . . . PLATANACEÆ, Plane-Tree.
 Leaf . . . Shining green, smooth, firm.
 Seed . . . Ball, suspended with wirelike stem,
 pin-head markings.
 Bark . . . Smooth, thin, brown, scaling, leaving
 smooth gray trunk beneath.
 Height . . . 80 ft. to 100 ft., occasionally 170 ft.
 Habitat . . . Southeastern N. H., southern Me. to
 northern Vt., westward to eastern
 Neb. and Kan., south to northern
 Fla., central Ala., Miss., and
 Valley of Brazos River, Texas.

Liquidambar.

Liquidambar styraciflua.

- Family . . . HAMAMELIDEÆ, Witch-Hazel.
 Leaf . . . One-sided star shape, 5 to 7 lobes,
 thin, bright green, smooth.
 Seed . . . In a spherical pod-cluster, mostly
 abortive seed.
 Bark . . . Gray, rough, corky ridges on the
 branchlets.
 Height . . . 60 ft. to 80 ft., sometimes 140 ft.
 Habitat . . . Fairfield Co., Conn., to southeastern
 Mo., south to Tampa Bay, Fla.,
 through Ark. and Ind. Ter., to
 Valley of Trinity Riv., Texas.

Character: Leaves and bruised branches exhale
 a resinous odor.

OF THE TREES.

THE botanical names of trees have been revised according to certain laws now adopted by many botanists, and a most important revision, according to the Check-List made by George D. Sudworth, prepared under the direction of Prof. B. E. Fernow, for the United States Department of Agriculture, is given below, accompanied by a revision by Prof. C. S. Sargent (see Silva of North America), and the older

names according to Dr. Asa Gray (see Manual). The preference given in this book to the nomenclature of Dr. Gray, is naturally conservative, but consistent with the fact that Dr. Gray's Manual is its standard of authority; at the same time the reform in the use of names is sure to be established in time, and the accompanying list is essentially valuable to a popular work of this kind.

	Dr. ASA GRAY.	C. S. RABST.	Geo. B. SUDWORTH.
Ailanthus or Ailantus.	Ailanthus glandulosa.		
Alder, Black.	Ilex verticillata.		
Arbor Vite, or White Cedar.	Thuja occidentalis.		
Ash, Black.	Fraxinus americana.	Fraxinus nigra.	Fraxinus nigra.
Ash, Blue.	Fraxinus quadrangulata.		
Ash, Green.	Fraxinus viridis.		
		Fraxinus Pennsylvanica var. lanceolata.	Fraxinus lanceolata.
Ash, Mountain.			
Ash, Red.	Pyrus Americana.	Fraxinus Pennsylvanica.	Pyrus americana.
Ash, Water or Swamp.	Fraxinus pubescens.	Fraxinus Caroliniana.	Fraxinus pennsylvanica.
Ash, White.	Fraxinus platycarpa.		Fraxinus caroliniana.
Aspen.	Fraxinus Americana.		Fraxinus americana.
Aspen, Large-toothed.	Populus tremuloides.		
Balm of Gilead.	Populus grandidentata.		
	Populus balsamifera var. canadensis.		
Basswood, Small-leaved.	Tilia pubescens.		
Beech.	Fagus ferruginea.	Fagus Americana.	Fagus atropurpurea.
Buckeye, Ohio or Fetid.	Asculus glabra.		
Buckeye, Sweet.	Asculus hirta.	Asculus octandra.	Asculus octandra.
Bursling Bush.	Eucosmus Europaeus.		Eucosmus europaeus.
Butternut.	juglans cinerea.		
Buttewood or Sycamore.	Platanus occidentalis.		
Birch, Black, or Sweet.	Betula lenta.		
Birch, European.	Betula alba.		
Birch, Gray.	Betula populifolia.		
Birch, Paper, Canoe, or White.	Betula papyrifera.		
Birch, Red, or River.	Betula nigra.		
Birch, Yellow.	Betula lutea.	Catalpa catalpa.	Catalpa catalpa.
Catalpa.	Catalpa bignonioides.		
Cedar, Red.	Juniperus Virginiana.	Caprea thyrifera.	Juniperus virginiana.
Cedar, White.	Chamaecyparis sphenoides.		Chamaecyparis thyrifera.
Cherry, Black.	Prunus serotina.		
Cherry, Cocks.	Prunus Virginiana.		Prunus virginiana.
Cherry, Red, or Bird Cherry.	Prunus Pennsylvanica.		Prunus pennsylvanica.
Chestnut.	Castanea sativa var. Americana.	Castanea dentata.	Castanea dentata.
		Populus deltoides.	Populus deltoides.
Cottonwood.	Populus monilifera.		
Cucumber Tree.	Magnolia acuminata.		
Dogwood, Alternate-leaved.	Cornus alternifolia.		
Dogwood, Flowering.	Cornus florida.		
Elm, American, or White.	Ulmus americana.		Ulmus americana.
Elm, Corky White.	Ulmus racemosa.		
Elm, Red, or Shagbary.	Ulmus alba.		Ulmus pubescens.
Fl. Balsam.	Abies balsamea.		
Fringe Tree.	Chionanthus Virginica.		Chionanthus virginica.
Hackberry, or Sugarberry.	Celtis occidentalis.		
Haw, Black.	Viburnum prunifolium.		
Haw, Scarlet.	Crataegus coccinea var. mollis.		
Hemlock.	Tsuga Canadensis.		
Hickory, Brown, or Ficus.	Carya porcina.	Hicoria glabra.	Tsuga canadensis.
Hickory, or Shagbark.	Carya alba.	Hicoria ovata.	Hicoria glabra.
Hickory, Swamp, or Bittersweet.	Carya amara.	Hicoria minima.	Hicoria ovata.
Hickory, White-heart, or Mochaert.	Carya tomentosa.	Hicoria alba.	Hicoria minima.
			Hicoria alba.
Holly, American.	Ilex opaca.		
Hornbeam, or Water Birch, or Elm Beech.	Carpinus Caroliniana.		
Hornbeam, Hop, or Ironwood.	Ostrya Virginica.	Ostrya Virginica.	Ostrya virginica.
Horse Chestnut.			
Ilex, Mountain.	Asculus Hippocastaneus.		Asculus hippocastaneus.
Kentucky Coffee Tree.	Ilex monticola.	Gynocodium dioica.	Gynocodium dioica.
	Gynocodium Canadensis.		

AMES

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SUBWORTH.

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	DR. ASA GRAY.	C. S. BARRETT.	DR. B. SOUTHWORTH.
Larch, American, or Hackmatack.	<i>Larix Americana.</i>	<i>Larix laricina.</i>	<i>Larix laricina.</i>
Linden, American, or Basswood.	<i>Tilia Americana.</i>		<i>Tilia americana.</i>
Liquidambar, or Sweet Gum.	<i>Liquidambar styraciflua.</i>		<i>Robinia pseudacacia.</i>
Locust.	<i>Robinia Pseudacacia.</i>		<i>Gleditsia triacanthos.</i>
Locust, Honey.	<i>Gleditsia triacanthos.</i>		
Magnolia, Small, or Sweet Bay.	<i>Magnolia glauca.</i>		
Maple, Ash-leaved, or Box Elder.	<i>Negundo aceroides.</i>	<i>Acer negundo.</i>	<i>Acer negundo.</i>
Maple, Black Sugar.	<i>Acer saccharinum var. nigrum.</i>	<i>Acer barbatum var. nigrum.</i>	<i>Acer saccharum nigrum.</i>
Maple, Mountain.	<i>Acer spicatum.</i>		
Maple, Norway.	<i>Acer platanoides.</i>		
Maple, Red, or Swamp.	<i>Acer rubrum.</i>		
Maple, Striped, or Goosefoot.	<i>Acer Pennsylvanicum.</i>	<i>Acer barbatum.</i>	<i>Acer pennsylvanicum.</i>
Maple, Sugar, or Rock.	<i>Acer saccharinum.</i>	<i>Acer saccharinum.</i>	<i>Acer saccharum.</i>
Maple, White or Silver.	<i>Acer dasycarpum.</i>		<i>Acer saccharinum.</i>
Mulberry, Red.	<i>Morus rubra.</i>		
Oak, Basket, or Cow.	<i>Quercus Michauxii.</i>	<i>Quercus velutina.</i>	<i>Quercus michauxii.</i>
Oak, Black.	<i>Quercus coccinea var. tinctoria.</i>	<i>Quercus Marilandica.</i>	<i>Quercus velutina (Yellow Oak).</i>
Oak, Black Jack.	<i>Quercus nigra.</i>		<i>Quercus marilandica.</i>
Oak, Bar, or Overcup.	<i>Quercus macrocarpa.</i>		
Oak, Chestnut.	<i>Quercus prinus.</i>		
Oak, Laurel.	<i>Quercus imbricaria.</i>		
Oak, Pin.	<i>Quercus palustris.</i>	<i>Quercus minor.</i>	<i>Quercus minor.</i>
Oak, Post, or Iron.	<i>Quercus stellata.</i>		
Oak, Red.	<i>Quercus rubra.</i>		
Oak, Scarlet.	<i>Quercus coccinea.</i>		
Oak, Spanish.	<i>Quercus falcata.</i>	<i>Quercus digitata.</i>	<i>Quercus digitata.</i>
Oak, Swamp White.	<i>Quercus bicolor.</i>	<i>Quercus platanoides.</i>	<i>Quercus platanoides.</i>
Oak, Water.	<i>Quercus aquatica.</i>	<i>Quercus nigra.</i>	<i>Quercus nigra.</i>
Oak, White.	<i>Quercus alba.</i>		
Oak, Willow.	<i>Quercus Phellos.</i>		<i>Quercus phellos.</i>
Oak, Yellow Chestnut.	<i>Quercus Muhlenbergii.</i>	<i>Quercus acuminata.</i>	<i>Quercus acuminata (Chinquapin Oak).</i>
Poplar, or Cuttard Apple.	<i>Asimina triloba.</i>		
Persea.	<i>Diospyros Virginiana.</i>		<i>Diospyros virginiana.</i>
Pine, Gray, or Jack.	<i>Pinus Banksiana.</i>	<i>Pinus divaricata.</i>	<i>Pinus divaricata.</i>
Pine, Jersey Scrub.	<i>Pinus inops.</i>	<i>Pinus Virginiana.</i>	<i>Pinus virginiana.</i>
Pine, Loblolly, or Old Field.	<i>Pinus taeda.</i>		<i>Pinus taeda.</i>
Pine, Northern Pitch.	<i>Pinus rigida.</i>		
Pine, Red, or Norway.	<i>Pinus resinosa.</i>		
Pine, Southern Yellow, or Georgia, or Long-leaf.	<i>Pinus palustris.</i>		
Pine, Table Mountain.	<i>Pinus pungens.</i>		
Pine, White.	<i>Pinus strobus.</i>		<i>Pinus strobus.</i>
Pine, Yellow, Short-leaf Pine.	<i>Pinus mitis.</i>	<i>Pinus echinata.</i>	<i>Pinus echinata.</i>
Plant, Canada.	<i>Prunus Americana.</i>	<i>Prunus nigra.</i>	<i>Prunus nigra.</i>
Poplar, Balsam.	<i>Populus balsamifera.</i>		
Poplar, Balsam — Varieties.	<i>Populus balsamifera var. latifolia.</i>		
	<i>Populus balsamifera var. latifolia.</i>		
	<i>Populus balsamifera var. virginiana.</i>		
Poplar, White.	<i>Populus alba.</i>	<i>Populus alba.</i>	<i>Populus alba.</i>
Red Bud, or Judas Tree.	<i>Cercis Canadensis.</i>		<i>Cercis canadensis.</i>
Sassafras.	<i>Sassafras officinale.</i>	<i>Sassafras Sessifera.</i>	<i>Sassafras sassafras.</i>
Spruce, Black.	<i>Picea nigra.</i>	<i>Picea Mariana.</i>	<i>Picea mariana.</i>
Spruce, Red.	<i>Picea nigra var. rubra.</i>	<i>Picea rubens.</i>	<i>Picea rubens.</i>
Spruce, White, or Cat.	<i>Picea alba.</i>	<i>Picea Canadensis.</i>	<i>Picea canadensis.</i>
Thorn, White, or Scavert-fruited.	<i>Crataegus coccinea.</i>		
Tulip Tree.	<i>Liriodendron tulipifera.</i>		
Tupelo, or Sour Gum.	<i>Nyssa sylvatica.</i>		
Umbrella Tree.	<i>Magnolia Umbrella.</i>	<i>Magnolia tripetala.</i>	<i>Magnolia tripetala.</i>
Viburnum, Sweet, or Sheep-berry.	<i>Viburnum Lentago.</i>		<i>Viburnum lentago.</i>
Walnut, Black.	<i>Juglans nigra.</i>		
Willow, Black.	<i>Salix nigra.</i>		
Willow, Crack.	<i>Salix fragilis.</i>		
Willow, Heart-leaved.	<i>Salix cordata.</i>	<i>Salix serotilla.</i>	<i>Salix serotilla.</i>
Willow, Long-leaved.	<i>Salix longifolia.</i>		<i>Salix longifolia.</i>
Willow, Weeping.	<i>Salix Babylonica.</i>		<i>Salix babylonica.</i>
Willow, White.	<i>Salix alba var. carulea.</i>		
Yellowwood, or Virginia.	<i>Cladonia tinctoria.</i>	<i>Cladonia lutea.</i>	<i>Cladonia lutea.</i>

ALPHABETICAL INDEX

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